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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2016 / 2017 SESSION

**DOM5018 – OPERATIONS MANAGEMENT**  
(Diploma Students Only)

13 OCTOBER 2016  
9.00 am – 11.00 am  
(2 Hours)

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**INSTRUCTIONS TO STUDENTS**

1. This question paper consists of 9 pages with 3 sections.
2. Answers for section A and B should be shaded on the OMR sheet provided.
3. For section C, please write your answers in the answer booklet provided.

**SECTION A: MULTIPLE CHOICE QUESTIONS (each question carries 1 mark).**

1. Which of the following is NOT one of the 10 strategic operations management decisions?
  - A. Layout strategy
  - B. Supply chain management
  - C. Mass customisation
  - D. Location strategy
2. Which of the following is an example of pure service?
  - A. You send your car to BHP automated car wash near your house.
  - B. You meet your academic advisor to consult her for your study plan.
  - C. Your father was enjoying coins operated massage chair at AEON Bandaraya Melaka while waiting for you and your mother to finish shopping.
  - D. Mimi is playing online games in a café at Bukit Beruang.
3. Next year, Joven will produces 57,600 hot water heaters at its plant in Singapore in order to meet global demand. To accomplish this, each worker at Singapore plant will work 160 hours per month. If the labour productivity at the plant is 0.15 hot water heaters per worker per hour, how many workers are employed at the plant?
  - A. 120
  - B. 2400
  - C. 3800
  - D. 950
4. Which of the following service is LEAST likely to be customised to individual needs?
  - A. Hair cutting
  - B. Dental
  - C. Government secondary school service
  - D. Individual piano lesson
5. A \_\_\_\_\_ is an action plan to achieve the mission.
  - A. vision
  - B. strategy
  - C. competitive advantage
  - D. globalisation
6. Which of the following product which will soon be decreased into decline stage?
  - A. Apple smart watch
  - B. Hybrid vehicles
  - C. Laptop computers
  - D. Electric cars

Continued...

7. There should be little product differentiation during \_\_\_\_\_ stage of product life cycle.
- A. introduction
  - B. growth
  - C. maturity
  - D. decline
8. Which of the following firm can be best described as practising differentiation strategy?
- A. Tune Hotels
  - B. Air Asia
  - C. Tesco
  - D. Lexis Hibiscus Port Dickson
9. Forecasting is a process of \_\_\_\_\_ a future event.
- A. making
  - B. predicting
  - C. supplying
  - D. scheduling
10. Max works in Cottage Hotel Penang, and he is doing a prediction on the demand for rooms for next year school holidays. This is an example of \_\_\_\_\_ forecast.
- A. economic
  - B. technological
  - C. sales
  - D. statistics
11. Samsung would like to design a new model of smart watch that uses solar power, \_\_\_\_\_ would be most appropriate for this new product planning.
- A. Manufacturing forecast
  - B. Short range forecast
  - C. Medium range forecast
  - D. Long range forecast
12. Which of the following is NOT a type of qualitative methods of forecasts?
- A. Delphi Method
  - B. Jury of executive opinion
  - C. Naive approach
  - D. Consumer market survey

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Refer to Exhibit 1 for question 13 and 14.

Month	Sales (RM)
January	360
February	389
March	410
April	298

*Exhibit 1*

13. Based on 3-month moving average, forecast for May will be \_\_\_\_\_.  
 A. RM 364.25  
 B. RM 285.65  
 C. RM 350.25  
 D. RM 365.67
14. Based on weighted moving average forecast method, by using a weight of 4 for the most recent month, 3 for the next most recent, 2 for the next and 1 for the next, the forecast for May will be \_\_\_\_\_.  
 A. RM 356  
 B. RM 328  
 C. RM 285  
 D. RM 325
15. Which of the following product highly involve in time-based competition?  
 A. Smartphone  
 B. Stationary  
 C. Furniture  
 D. Gym center
16. Fast food restaurants like Mc Donald rely heavily on few main ingredients such as meat patties, cheese, buns, mayonnaise, vegetables and french fries to make a variety of meals. This \_\_\_\_\_ design offer flexibility in their production making that can make changes on meal easier.  
 A. robust  
 B. modular  
 C. computer aided  
 D. value analysis
17. Inspection is to examine items to see if an item is \_\_\_\_\_ or \_\_\_\_\_.  
 A. beautiful; defective  
 B. faulty; durable  
 C. colorful; durable  
 D. good; defective

Continued...

18. Milly bought a pop corn scoop to ensure that each bag of the pop corn that she sells contains the same quantity. This is an example of \_\_\_\_\_.
- international standard
  - poka-yoke
  - checklist
  - total quality management
19. Edmund and Rooban is discussing about their car performance. Edmund claimed that his new Peugeot 508 has a very good quality as it can move faster than his previous Volkswagen Passat. Edmund is evaluating the quality of Peugeot on \_\_\_\_\_ basis.
- product
  - manufacturing
  - user
  - general
20. Which of the following requires fixed position layout?
- Car assembly
  - Building a house
  - Vegetarian Restaurant
  - 7-Eleven Convenience Store
21. \_\_\_\_\_ is the percentage of design capacity actually achieved whereas \_\_\_\_\_ is the percentage of effective capacity actually achieved.
- Efficiency; utilisation
  - Efficiency; loading
  - Utilisation; efficiency
  - Utilisation; loading
22. EC manufacturing is a newly established firm in Malaysia and the employees receive the salary increment only by mastering new skills such as quality control, product design, and scheduling. EC manufacturing is adopting \_\_\_\_\_ to motivate its employees.
- incentive systems
  - gain sharing
  - knowledge based systems
  - bonuses
23. One of the benefits of expanded job design is to \_\_\_\_\_ productivity and \_\_\_\_\_ turnover.
- reduce; reduce
  - improve; improve
  - improve; reduce
  - reduce; improve

Continued...

24. \_\_\_\_\_ is choosing between obtaining products and services externally as opposed to producing them internally.
- A. Outsourcing
  - B. Make or buy decisions
  - C. Maintenance
  - D. Finished goods
25. \_\_\_\_\_ inventory is material that is usually purchased, but has yet to enter the manufacturing process.
- A. Raw material
  - B. Work in process
  - C. Maintenance
  - D. Finished goods
26. According to \_\_\_\_\_, price of item are reduced when larger quantities are purchased.
- A. basic economic order quantity (EOQ) model
  - B. production order quantity model
  - C. quantity discount model
  - D. inventory model
27. \_\_\_\_\_ supply the customer with exactly what the customer wants, when the customer wants it, without waste and through continuous improvement
- A. Maintenance
  - B. Lean operations
  - C. Taguchi
  - D. Variability
28. Which of the following is NOT one of Toyota Production System's principles?
- A. Respect for people
  - B. Continuous improvement
  - C. Cost Saving Project
  - D. Processes and standard work practice
29. Which of the following is NOT included in the 5Ss?
- A. Standardise
  - B. System
  - C. Sustain
  - D. Shine
30. Which of the following application is best suited for predictive maintenance?
- A. Printer
  - B. Swimming pool
  - C. Engine oil of car gearbox
  - D. Smartphone

[TOTAL 30 MARKS]

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**SECTION B: TRUE/FALSE QUESTIONS (each question consists of 1 mark).****Shade "A" for the TRUE statement and "B" for the FALSE statement.**

31. Customer interaction is often high for manufacturing processes but low for services.
32. Reliability is matching market changes in design innovation and volumes.
33. Outsourcing refers to transferring activities that traditionally has been conducted internally to external suppliers.
34. In reality, forecasts are seldom perfect due to unpredictable outside factors.
35. "Making it right the first time" is the focus of the user-based definition of quality.
36. Internal benchmarking can be established when the organisation is large enough.
37. One of the helpful ideas for supermarket layout is to locate high-draw items around the periphery of the store, which is why we tend to find dairy products such as yogurt, juices and fresh milk on one side of a supermarket.
38. Job expansion can lead to increase in labor costs because of the extra workers hired in the expansion.
39. One of the advantages of cycle counting is that it maintains accurate inventory records.
40. Keiretsu refers to a company coalition that is part of collaboration, part purchasing from many suppliers, and part vertical integration.

**[TOTAL 10 MARKS]****Continued...**

**SECTION C: STRUCTURED QUESTIONS****Answer ALL questions.****QUESTION 1****"Intel shifts Kulim ops to China and Vietnam, 600 let off"**

28 May 2015, GEORGE TOWN: Chip-making leader Intel Corp is relocating some of its mature products to China and Vietnam from the facility in Kulim, and has started relieving some of the workers attached to them. Sources told StarBiz that the Kulim facility has for the past weeks let off about 600 workers involved in manufacturing the mature products for the desktop PC market to Intel's facilities in Ho Chih Minh and Chengdu, where there is cost-savings on labour.....“Intel is transferring to Kulim new technology products from places like Costa Rica to support the server market and other trendy consumer electronic products,” the sources said. Intel employs some 8,000 employees in Malaysia, of which more than 40% are based in Kulim.....”

*Source:<http://www.thestar.com.my/business/business-news/2015/05/28/intel-shifts-kulim-ops-to-china-and-vietnam/>*

- a) Based on the news above, what was the main factor that caused Intel to shift part of their production from Kulim to China and Vietnam? (2 marks)
  
- b) If you are the Operations Manager in this company, apart from the factor in (a), what are the other **FIVE (5)** possible factors that need to be considered in relocating the plant to China and Vietnam? Explain all factors in detail. (10 marks)
  
- c) How would this shift affect the markets in Malaysia and Vietnam? (3 marks)

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**QUESTION 2**

Labour planning determines staffing policies that deal with employment stability, work schedules and work rules.

- a) Define employment stability. (1.5 marks)
- b) Describe **TWO (2)** basic employment stability policies. Provide an example of a situation that suitable for each policy. (6 marks)
- c) Apart from standard work schedule, describe other **THREE (3)** types of work schedules that can be practiced by an organisation. (6 marks)
- d) Define work rules. (1.5 marks)

**QUESTION 3**

- a) Firms recognise that the transportation of goods always involves high cost. Therefore, firms constantly evaluate their means of transportation of goods. Explain **FIVE (5)** types of shipping systems that firms can adopt and explain the appropriate use of each type. (10 marks)
- b) Logically it will be more convenient if a firm has its own logistics service. However, there are still many large firms outsourcing their logistics service. Why do these firms still opt for third party logistics (3PL)? Provide **TWO (2)** reasons. (3 marks)
- c) Name **TWO (2)** Logistics Company in Malaysia. (2 marks)

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**QUESTION 4**

- a) Taiichi Ohno has identified seven categories of waste and these categories have become popular in lean organisation. Explain Ohno's **SEVEN (7)** types of wastes.

(7 marks)

- b) Cubic Electronics Sdn. Bhd. produces car sensors. You have been asked to reduce inventory by introducing a kanban system. After several hours of analysis, you have developed the following data. How many kanbans are needed? (4 marks)

- Daily demand: 5,200 units
- Production lead-time: 1  $\frac{1}{2}$  day
- Safety stock: 1 day
- Kanban size: 200 units

- c) Differentiate between preventive maintenance and breakdown maintenance.

(4 marks)

[TOTAL 60 MARKS]

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